

5080

Diag. Cht. No. 8502, 8556-1

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey

Hydrographic
5080

Field No.

Office No.

LOCALITY

State

Alaska

General locality

South of

Locality

Kodiak Island

1950

CHIEF OF PARTY

F. A. Hardy

LIBRARY & ARCHIVES

DATE

5080

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5080

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 26

REGISTER NO. 5080

State ~~Southwest~~ Alaska
General locality South of Kodiak Island
Locality Eastern Part of
Vicinity Sitkinak Strait
Scale 1:20 000 Date of survey June 17 to Sept 30 1930
Vessel Surveyor, Wildcat, Helianthus and launches
Chief of Party F. H. Hardy, H. & G. Eng'r.
Surveyed by F. H. Hardy, et. al.
Protracted by R. W. Knox
Soundings penciled by R. W. Knox
Soundings in fathoms ~~mean~~
Plane of reference mean lower-low water
Subdivision of wire dragged areas by
Inked by
Verified by
Instructions dated April 1, 1930
Remarks:

DESCRIPTIVE REPORT
TO ACCOMPANY HYDROGRAPHIC SHEET No. 26

Scale: 1,20,000.

KODIAK ISLAND

VICINITY SITKINAK STRAITS

INSTRUCTIONS DATED April 1, 1930.

SURVEYED BY F. H. HARDY, et .al. Party of SS SURVEYOR
F.H. Hardy, H&GE., Commanding.

SURVEY METHODS: The area covered by sheet 26 was surveyed in the greater part by the launch WILDCAT, with supplemental work inshore by the launches HELIANTHUS, No. 3, and the MOTORSAILER. An area in the eastern portion of the sheet was surveyed by the SURVEYOR with the fathometer red light method, and several lines were run thru the channel with both fathometer and hand lead.

SURVEYOR: The corrections to the fathometer red light soundings were computed from about 80 vertical cast comparisons recorded in the volumes of this and the adjoining sheet to the westward, No. 24. As the ship work was accomplished for the most part within a limited time, no temperature corrections were used. The soundings were plotted on cross section paper and the corrections determined by drawing a smooth curve thru the plotted points.

An examination of the fathometer soundings that lie in close proximity of the WILDCAT work show the reduced fathometer soundings to be too deep by about 1 fathom in depths to 17 fathoms and an average of about one-half fathom to 20 fathoms. Few, if any, discrepancies were noted in depths greater than 25 fathoms .

Survey methods, continued:

WILDCAT: The electric sounding machine on the WILDCAT is located on the port side, forward. A system of sheaves and a boom, similar to those on the larger vessels, is used to rig the wire over the side. An 18 lb. lead was found to be the best suited for the work in the depths encountered. A 12 lb. hand lead was used.

It was found necessary to use the machine in depths as shoal as 8 fathoms in running against the full strength of the tide, as tests showed the impossibility of keeping a bight out of the ^{hand lead} line under such conditions. One test line run showed a full fathom difference in about 11 fathoms between the wire soundings and hand lead while under way, and about a half fathom difference while dead in the water. The lead lines were made from phosphor bronze wire core tiller cord and no difficulty was experienced in keeping the corrections within the prescribed limits.

HELIANTHUS, MOTORSAILER & LAUNCH No. 3: Standard survey methods were followed.

DISCREPANCIES: Discrepancies between WILDCAT vertical casts and ship fathometer soundings have already been mentioned. Several small discrepancies were noted in the failure of lines to cross. It is thought that most of them could be accounted for by the character of the bottom; several, notably a one fathom difference (Lat. $56^{\circ} 37.4$; Long. $154^{\circ} 04.8$) in Launch No. 3's work in the vicinity of positions 84, 85a day and 76, 77b day, are undoubtedly due to slight displacements in time of the soundings.

On positions 159-160 d day, in Lat. $56^{\circ} 37.8$ Long. $154^{\circ} 08.9$, WILDCAT, the sheave was evidently misread 10 fathoms. The soundings on positions 157 and 158 are 23 and 21, and on 161 is 17 fathoms, all of which are checked by subsequent launch work.

Continued:

The recorded soundings (reduced) on 159 and 160 are 19 and 18. It is believed that they should be 29 and 28. The launch work was done on a separate boat sheet and as a consequence the discrepancy was not picked up in the field. *changed to 29 and 28*

There exists a discrepancy in position of the lines on the smooth and boat sheets south of lat. 56 35.5 due to the following reason:

Triangulation stations Camp and False Head were recovered and their positions re-computed to the Valdes datum. The 1930 computation of Camp showed the 1906 position to be in error about 65 meters, and as Camp was extensively used in the traverse running, the position of the signals was consequently in error. The traverse was re-run and the correct location of the signals plotted in black circles on the boat sheet. All positions thru a day were plotted in the field, using the erroneous positions (red circles), as ^{were} split lines run at a later date.

DANGERS AND SHOALS: There is a large rocky patch about $2\frac{1}{2}$ miles south of Aiaktalik Island with a least sounding of $4\frac{4}{6}$ fathoms in lat. $56^{\circ} 39' 2$, Long. $154^{\circ} 06' 4$. The kelp marking this patch is practically always towed under by the current.

A group of rocks baring 11 feet at MLLW and outlined by heavy kelp is located in Lat. $56^{\circ} 40' 7$, Long. $154^{\circ} 07' 0$.

The area east to south of the southeast point of Aiaktalik Island is very foul for a distance of about $1\frac{1}{2}$ miles. Numerous reefs and rocks bare at the lower waters. (The whole area is more or less covered with a thick growth of kelp, and sounding lines were run wherever it was thin enough to navigate a launch.)

Continued:

The heights above MLLW of the rocks and reefs of this area were obtained for the most part from the launch work. A few of those inshore were computed by the topographer.

The kelp patch immediately south of the middle of Aiaktalik Island is extremely thick, and no attempt was made to sound it out. The lines as run around it mark the limits of the patch.

[Two groups of two rocks each lie 1/2 and 1 mile, respectively, off the northeast tangent of Sitkinak Island. The elevation of the outer group is 18 feet, and of the inner, 13 feet, *Use Elev. on Topo sheet which refers to MLLW* *assumed* ~~above mean sea level.~~

The reef on which the PAVLOF struck was reported to lie in Lat. $56^{\circ} 38.5'$ Long. $153^{\circ} 58.1'$. From bearings given in the original report of the grounding, the reef could be plotted in two places, dependent upon which of the two tangents of the north side of Sitkinak Island were used. One position, that given above, agrees with the PD sunken rock shown on chart 8502, while the second plotted near the edge of the reef off the south east point of Aiaktalik Island, in approximately Lat. $56^{\circ} 40'$ Long. $154^{\circ} 00'$. Captain Knight, master of the Pacific American Fisheries SS CATHERINE D., who was in command of the PAVLOF at the time of her grounding stated, to the Commanding Officer of the SS SURVEYOR, during the progress of the survey, that the PAVLOF undoubtedly struck in the vicinity of the second position, and that a large crescent-shaped patch of kelp was seen fairly close aboard,

A system of lines with spacing about 75 meters was run over the first position - that shown on chart 8502. No evidence of shoaling was discovered, the depths ranging from 22 to 25 fathoms, with fine gray sand and broken shell bottom.

continued:

CHANNELS: There is a channel navigable for the largest vessels thru Sitkinak Straits. The SURVEYOR steered the following courses when entering the straits from the eastward, and bound for Alitak Bay: steer 270° true (WSW mag) passing off the north tangent of the island (Flat Point) a distance of 1 1/8 miles. Continue on course for 3.8 mile or until the northwest tangent (Valley Point) bears 190° true (S X E mag), then change to 0° true (NNW mag).

ANCHORAGES: The SURVEYOR anchored in the bight to the eastward of Flat Point in approximately Lat. 56° 35'.3, Long. 154° 03'.7, in 9 to 10 fathoms of water, sand bottom. The WILDCAT and HELIANTHUS anchored in the same vicinity but in 5 to 6 fathoms with sandy bottom. Good protection from the west and northwest is afforded at this anchorage, altho strong tidal currents were experienced at times. During southeast of southwest weather the launches would anchor off signal SLUE in 4 to 5 fathoms, sand bottom.

COMPARISON WITH PREVIOUS SURVEYS: There were no previous surveys in this area.

CURRENTS: Very strong tidal currents were experienced in the narrower part of the straits, particularly in the vicinity of Flat Point, Wart Island and the 4 4/6 fathom shoal. Many times the currents were observed to run at a velocity of 4 to 5 knots, and on one occasion - in the vicinity of the above mentioned 4 4/6 fm shoal - it reached an estimated velocity of 6 1/2 knots. The strongest currents follow the low waters, reaching a maximum about 2 hours after the predicted time. The heaviest tide rips and overfalls were also observed to occur with a flood tide and westerly winds.

continued;

Whirlpools of large extent and considerable activity were experienced off Flat Point, and smaller ones off Wart Island.

BOTTOM: With the exception of "rocky" bottom specimens taken within about a mile off Aiaktalik Island and through the narrower part of the straits, practically all others were fine gray sand or broken shell.

Attention is called to the "pot hole" off Flat Point; it reaches a depth of 32 fathoms.

PLOTTING: In the smooth sheet plotting, the following colors were used to designate the ship and the several launches, in numbering the positions:

| | |
|--------------|----------------------------|
| SURVEYOR | red, upper case letters |
| WILDCAT | red, lower case letters |
| HELIANTHUS | yellow, lower case letters |
| MOTORSAILER | blue, lower case letters |
| LAUNCH nO. 3 | green, lower case letters. |

The following positions, recorded in the volumes of sheet 25 (5086) are plotted on sheet 26⁽⁵⁰⁸⁰⁾. The position numbers were underscored with a small line to designate this fact:

| | |
|-------------|------------------------------------------|
| MOTORSAILER | a day, positions 1 to 85 and 145 to 211. |
| WILDCAT | a day, all positions |
| | b day, positions 1 to 25 |
| | g day, all positions. |

Of the ship positions recorded in the volumes of this sheet, the following were plotted on sheet 24: (5081)

| |
|---------------------------|
| a day, positions 1 to 13 |
| b day, all positions |
| c day, positions 1 to 27 |
| e day, positions 1 to 22 |
| f day, all positions |
| g day, all positions |
| h day, positions 1 to 10. |

Because of the signals used, some of the above positions were plotted by necessity on sheet 26⁽⁵⁰⁸⁰⁾ and then transferred by dm's and dp's to

continued:

sheet 24,⁽⁵⁰⁸¹⁾ where the soundings are plotted. They are:

| | |
|----------------------------|-----------|
| a day, positions 10 to 13 | 9-14 incl |
| b day, positions 12 and 13 | 12-13 " |
| c day, positions 17 to 26 | 17-27 " |
| e day, positions 13 to 21 | 13-22 " |
| f day, positions 7 to 10. | 7-10 " |

Due to congestion of lines and the large number of positions, it was thought best not to number all positions on the smooth sheet. In order to simplify the verification of the sheet the kelp patches were merely outlined, and in a few places where the soundings were particularly close together, it was omitted altogether. Tide rip and whirlpool symbols were omitted for the same reason.

GEOGRAPHIC NAMES: Flat Point - so named by the field parties of 1906 and 1930 because of the very definite flat shelf marking out to form the point.

Valley Point - so called by the field parties of 1906 and 1930 because of the valley making down to the coast about half a mile to the eastward of the actual point. Added reason for this name rests in the fact that a distinct submarine valley lies about due north of the point (see sheet 24).

Wart Island - see report on topographic sheet D.

Robert W. Knox
Robert W. Knox,
H&G Engineer.

Approved and forwarded:

F. H. Hardy
F. H. Hardy,
H. & G. Engineer.

APPROVAL OF CHIEF OF PARTY:

Field sheet No. 26 and accompanying records have been inspected and approved by me. The field and office work were done under my occasional supervision.

No additional work is considered necessary.

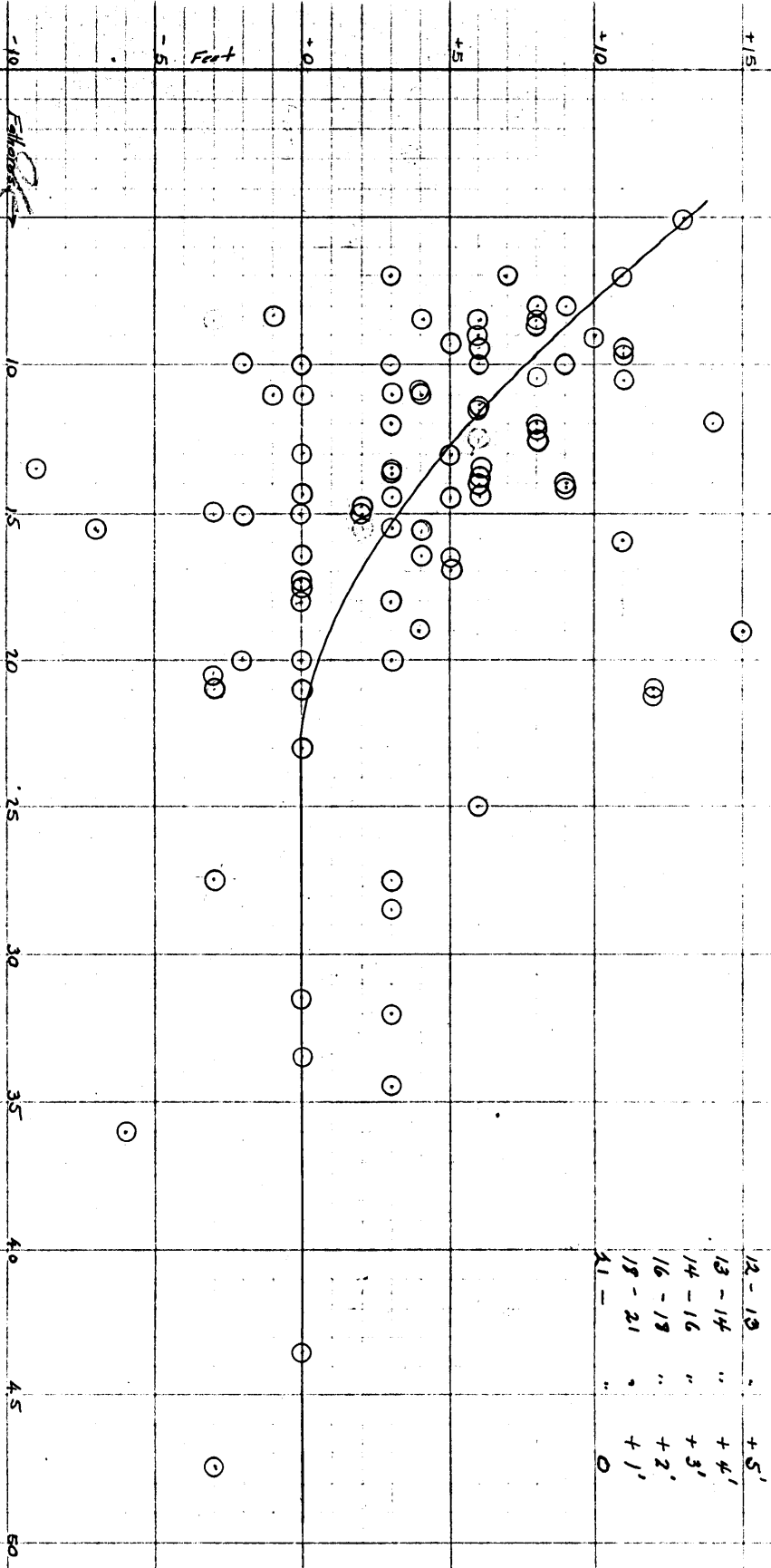
It was the intention of the chief of party to wire drag the areas in the vicinity of Flat Point and the 4 4/6 fathom shoal, and all necessary equipment had been assembled aboard the launches. Before the work could be accomplished a northeaster scattered the parties and the boisterous weather that continued until the close of the field work prevented a further attempt.

No breakers were observed in these areas, nor have local navigators any knowledge of shoals other than noted, and it is felt certain that no danger to vessels exists in the traversing of Sitkinak Straits.

F. H. Hardy,
H. & G. Engineer.

Depth - - - Corr.

| | |
|---------|-----|
| 8-9 Fms | +9' |
| 9-10 " | +8' |
| 10-11 " | +7' |
| 11-12 " | +6' |
| 12-13 " | +5' |
| 13-14 " | +4' |
| 14-16 " | +3' |
| 16-18 " | +2' |
| 18-21 " | +1' |
| 21 - " | 0 |



Curve showing corrections to be applied to Fathometer Soundings - fitted by R.S.
Field Sheets # 24426 - 1930

Sheet 26

STATISTICS

HYDROGRAPHIC FIELD SHEET No. 26.

| Date. | Vol | Day. | St. mi. Sdgs. | Pos. | Sdgs. | Boat. |
|---------|-------|------|------------------|------|-------|----------|
| 1930. | | | | | | |
| July 2. | 1 | A | 10.7 | 22 | 114 | SURVEYOR |
| 9 | 1 | C | 45.3 | 115 | 566 | " |
| 10 | 1 | D | 22.1 | 44 | 290 | " |
| 11 | 2 | E | 3.5 | 10 | 56 | " |
| Sept. | | | | | | |
| 11 | 2 | H | 12.2 | 32 | 133 | " |
| 30 | 2 | J | 1.5 | 7 | 22 | " |
| June | | | | | | |
| 17 | 3 | a | 3.1 | 35 | 101 | WILDCAT |
| 18 | 3 | b | 12.4 | 97 | 229 | " |
| 19 | 3 | c | 21.5 | 128 | 257 | " |
| 21 | 3&4 | d | 23.0 | 168 | 261 | " |
| 23 | 4 | e | 16.0 | 141 | 242 | " |
| 24 | 4 | f | 3.0 | 33 | 37 | " |
| 25 | 4&5 | g | 24.0 | 260 | 405 | " |
| 27 | 5 | h | 10.3 | 113 | 152 | " |
| 28 | 5 | j | 18.3 | 181 | 249 | " |
| 30 | 5&6 | k | 36.0 | 344 | 495 | " |
| July | | | | | | |
| 1 | 6 | l | 33.0 | 281 | 443 | " |
| 22 | 7 | m | 19.6 | 166 | 291 | " |
| 25 | 7 | n | 21.1 | 204 | 277 | " |
| 26 | 8 | p | 13.2 | 94 | 166 | " |
| 28 | 8 | q | 9.3 | 66 | 113 | " |
| 30 | 8 | r | 14.0 | 109 | 202 | " |
| 31 | 8&9 | s | 25.0 | 228 | 347 | " |
| Aug. | | | | | | |
| 1 | 9 | t | 25.7 | 209 | 360 | " |
| 4 | 10 | u | 12.6 | 112 | 253 | " |
| 5 | 10 | v | 25.7 | 265 | 458 | " |
| 6 | 11 | w | 28.5 | 241 | 472 | " |
| 8 | 11 | x | 6.3 | 57 | 112 | " |
| 9 | 11&12 | y | 24.0 | 277 | 387 | " |
| 11 | 12 | z | 17.2 | 175 | 240 | " |
| 12 | 12&13 | aa | 17.5 | 167 | 225 | " |
| 13 | 13 | bb | 4.2 | 41 | 66 | " |
| 15 | 13 | cc | 10.6 | 109 | 159 | " |
| 16 | 13&14 | dd | 23.3 | 219 | 343 | " |
| 19 | 14 | ee | 22.0 | 190 | 343 | " |
| 20 | 15 | ff | 25.0 | 217 | 386 | " |
| 21 | 15 | gg | 3.8 | 36 | 47 | " |
| 27 | 15 | hh | 2.8 | 29 | 33 | " |
| Sept. | | | | | | |
| 4 | 15 | jj | 3.2 | 27 | 64 | " |
| 19 | 16 | kk | 4.2 | 36 | 42 | " |
| 20 | 16 | ll | 2.3 | 34 | 35 | " |

(continued on next page)

(FORFILES OF FIELD RECORDS SECTION)

Division of Hydrography and Topography:

March 21, 1931

Division of Charts:

Tide Reducers are approved in
volumes of sounding records for

23

HYDROGRAPHIC SHEET

5080

Locality

Eastern part of Sitkinak Strait, S.W. Alaska

Chief of Party:

Plane of reference is **V. E. Hardy in 1930**

ft. on tide staff at **mean lower low water, reading**

3.6 ft. below B. M.

Levy Bay

14.2

1

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Ren

Chief, Division of Tides and Currents.

STATISTICS - Sheet 26. (Cont.)

| Date | Vol. | Day | St. mi. Sdgs. | Pbs. | Sdgs. | Boat. |
|---------|-------|-----|------------------|------|-------|-------|
| 1930 | | | | | | |
| July 31 | 17 | a | 25.0 | 94 | 356 | HELI. |
| Aug. 17 | 17 | b | 12.5 | 73 | 292 | " |
| July 11 | 18 | a | 19.0 | 158 | 389 | M/S. |
| 12 | 18 | b | 24.5 | 211 | 503 | M/S. |
| 14 | 19 | c | 22.0 | 170 | 595 | M/S. |
| 11 | 20 | a | 18.3 | 156 | 502 | #3 |
| July 12 | 20&21 | b | 24.1 | 155 | 560 | #3 |
| 14 | 21&22 | c | 30.1 | 220 | 792 | #3 |
| 16 | 22 | d | 22.1 | 224 | 782 | #3 |
| 17 | 22&23 | e | 14.7 | 139 | 518 | #3 |
| Total | | | 869.3 | 6919 | 14762 | |

14515
14
Division of Hydrography and Topography:

March 21, 1931

Division of Charts:

Tide Reducers are approved in
23 volumes of sounding records for

HYDROGRAPHIC SHEET 5080

Locality Eastern part of Sitkinak Strait, S.W. Alaska

Chief of Party: F. H. Hardy in 1930

Plane of reference is mean lower low water, reading

3.6 ft. on tide staff at Lazy Bay

14.2 ft. below B. M. 1

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Paul T. Whitney

Chief, Division of Tides and Currents.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5080

The following statistics will be submitted with the
cartographer's report on the sheet:

| | |
|---------------------------------------------------------|--------|
| Number of positions on sheet | .7312 |
| Number of positions checked | .6457 |
| Number of positions revised | ...56 |
| Number of soundings recorded | 15,870 |
| Number of soundings revised | ...127 |
| Number of signals erroneously plotted or transferred |3 |

Date: July 7, 1931

Cartographer: John Fleming

DEPARTMENT OF COMMERCE

AND REFER TO No. 82-DRM

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 5080

Sitkinak Strait (Eastern Part)

Surveyed in 1930

Hand lead, machine, and Fathometer Soundings

Instructions dated April 1, 1930 (SURVEYOR)

Chief of Party, F. H. Hardy

Surveyed by F. H. H., C. D. Meaney, R. W. Knox, and A. C. Thorson

Protracted and soundings plotted by R. W. K.

Verified and inked by J. Fleming

1. The records were neat and legible, but in several volumes the recording of fixes was faulty. The principal defects were:
 - a) Failure to record change of fix when such change was made by the observers.
 - b) Entry of a new fix on new page when the fix actually remained unchanged.
 - d) Confusion of Δ Ayak with Δ Aiak, an error due no doubt to the similarity of sound.
2. The plan, character and extent of the development are considered excellent, and conform to the requirements of both the general and specific instructions with one important and a few minor exceptions:
 - a) The ridge lying between the south point of the 10 fathom curve in lat. $56^{\circ} 38'.5$, long. $154^{\circ} 05'.8$ and the two 10 fathom spots in lat. $56^{\circ} 37'.9$, long. $154^{\circ} 06'.5$ across which the sounding lines are too widely spaced according to paragraph 17-a of special instructions. This ridge lies across the ship channel as described in the descriptive report.

2. b) There are several places north and northwest of the buoy where the sounding line spacing exceeds the maximum prescribed in special instructions.
- c) South and southwest of the printed words "Sitkinak Strait" are some spots where the line spacing exceeds 300 m.; however, the bottom in this area is unusually smooth and the soundings obtained are considered sufficient.
3. The sounding line crossings are satisfactory and the few minor differences observed are no more than may be expected in areas having irregular bottom.
4. Only the 5 to the 20 fathom curves, inclusive, can be completely drawn.
5. The field plotting was excellent, but in numerous instances the errors of omission and commission by the recorder (obviously discovered by the plotter since the positions as plotted agree with the boat sheet) were not corrected in the record.

In the verification, therefore, when a sounding line was checked according to the record, a tracing of it was placed over the corresponding line on the boat sheet. The corrected fixes in the records are the result of protractor tests on the boat sheet. Allowing for the displacement of the lines in some places on the boat sheet due to the error in the position of Δ Camp, the agreement throughout was excellent. Mention may be made of the 600 m. displacement of the line at 141-a, lat. $56^{\circ} 32'.4$, long. $154^{\circ} 07'.5$ due to the use of a wrong signal.

The records in which the several discrepancies occur are:

| | |
|-----------------|-------|
| Vol. 1, page 36 | |
| 2 | 7-11 |
| 4 | 4-34 |
| 7 | 12-13 |
| 9 | 14 |
| 12 | 11 |
| 20 | 36 |

- a) \odot Blu (northwest of Wart Island, Topo. 4582) was named \odot Pas on this sheet. There were therefore two \odot Pas.
- b) \odot Sma (T. 4582) was named \odot Smi.
- c) Δ Tween (T. 4583) was shown as a topographic signal.
- d) Δ Camp (T. 4583) was not listed in Vol. 3 nor was it shown on this sheet, yet it was used as a part of a fix.

6. Junctions: The junction with H. 5081 on the west is very good, that is to say, the main part of the overlap which is on a line running southeast from Wart Island. For that part of the overlap lying north of $56^{\circ} 39'$ and west of $154^{\circ} 10'.5$, see verifier's report, page 2, H. 5081.

For overlap on the north see verifier's report on H. 5086.

There are no junction sheets on the east and south.

7. Comparison with previous surveys: Special instructions, paragraph 16, state that surveys prior to 1929 shall be considered "Reconnaissance." However, the rocks on the south coast of Wart Island, T. 2806, are not thought to represent a generalized condition, nor does the development on this or the adjoining sheet (H. 5081) disprove their existence. It is therefore recommended that they be charted.
8. Discrepancies: See note on page 4 of the descriptive report relative to discrepancies in the elevations of the two groups of rocks one-half and one mile northeast of Sitkinak Island.
9. The recorder failed to give the distance to the buoy noted on page 13, Vol. 2, nor was the buoy described. The position shown on the sheet in the office is, therefore, only approximate.
10. The delineation of that part of the reef in lat. $56^{\circ} 40'.5$, long. $154^{\circ} 00'.0$ is a composite of the topographic and boat sheets representations and information from the record.
11. The channel between Wart Island and Aiaktalik Island is well developed on H. 5086 but this information is of little value until more is known concerning the least water on the 2 fathom bar across the mouth of the channel ($56^{\circ} 41'$) this survey.
12. The following spots should be investigated when circumstances warrant:

| | | |
|------------|---------------------------|---------------------------|
| 5 fathoms, | lat. $56^{\circ} 41'.0$, | long. $153^{\circ} 58'.0$ |
| 7 $1/4$ " | 56 38. 7 | 154 05 .6 |
| 6 $5/6$ " | 56 35 .2 | 154 03 .3 |
| 5 $1/2$ " | 56 41 .7 | 153 58 .8 |
| 5 $1/2$ " | 56 39. 5 | 154 02 .6 |
| 17 " | 56 37. 75 | 154 05 .0 |
| 4 $1/2$ " | 56 36. 45 | 154 03 .8 |
| 4 $4/6$ " | 56 37. 3 | 154 12 .5 |

(Further development (by drag) around the point of the 10 fathom curve in lat. $56^{\circ} 39'$, long. $154^{\circ} 02'$ has ~~been~~ already been noted.)

13. Recommendations:

The area described under paragraph 2(a) should be dragged.

The area around the point of the 10 fathom curve, lat. $56^{\circ} 37'.7$, long. $154^{\circ} 03'.0$ should be dragged.

The open places described under paragraph 2 should have split lines run through them.

The 2 fathom bar described under paragraph 11 above should be developed for least water.

The shoal with least depth of $4 \frac{4}{6}$ fathoms in lat. $56^{\circ} 39'.2$, long. $154^{\circ} 06'.4$ should be dragged.

Inasmuch as the sunken rock P D shown on chart 8502 at the point given as the first position where the PAVLOV was reported to have struck, has been removed from the chart, a recommendation now regarding its disposition, is considered unnecessary. For information concerning the above subject see page 4, descriptive report and letter 202 (1931).

The work as a whole is considered excellent.

Great difficulty was found in inking this sheet owing to the porous condition of the paper.

14. Reviewed by John Fleming, July 6, 1931.

Inspected by E. P. Ellis

Approved:

A. M. Sobieralski
Chief, Section of Field Records

F. S. Borden
Chief, Section of Field Work

5080

& Add'l Wk.

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R S Patton, Director

State: SW Alaska

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 26
Hydrographic

LOCALITY

South of Kodiak Island

~~Vicinity Sitkinak Straits~~

Eastern Part of Sitkinak

Straits

1930

CHIEF OF PARTY
F. B. Siems in 1931

F. H. Hardy H & G Eng'r

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

MAR 16 1931

Acc. No. _____

5080
& Add'l Wk.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 5080 Supplemental

REGISTER NO. 5080 Add'l. Wk.
Plotted on original sheet

State Alaska

General locality S. E. of Kodiak Island

Locality Shoal Areas in Eastern Part of Sitkanak Straits

Scale 1-20,000 Date of survey Aug. 19-21, 1931

Vessel Motorsailer, Launch #4, Motor Dory

Chief of Party F.B.T. SIEMS

Surveyed by R. R. Moore, W.J. Chovan, G.M. Marchand

Protracted by To be plotted in Washington Office

Soundings penciled by _____

Soundings in fathoms ~~XXXX~~

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by _____

Inked by W.H. Bamford

Verified by W.H.B.

Instructions dated April 17, 1931

Remarks: This survey includes a small Wire Drag Area

REG. NO. 5080 Add'l Wk.
Plotted on original sheet

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC FIELD SHEET NO. 5080 Supplemental
SITKINAK STRAITS

Str. SURVEYOR

F.B.T. SIEMS, H. & G.E., Comd'g.

SCALE: 1:20,000

INSTRUCTIONS:

This work was completed under instructions dated April 17, 1931 and recommendations from report of the previous season.

GENERAL LOCATION:

The areas covered are a series of small shoals about two miles south of Aiakalik Island, on which further development was deemed necessary.

SURVEY METHODS:

The areas south of Triangulation Station ALAK were surveyed by the Motorsailer and Launch #4. Hand lead was used through-out.

The area south of Triangulation Station TALIK was dragged with small launch drag using the Motorsailer as guide launch and Launch #4 as end launch. Two launch control was used.

Control was furnished by triangulation of previous season.

TIDE GAUGE:

Auto portable gauge at Lazy Bay was used for the reduction of soundings.

RESULTS:

No depths less than those found the previous season were encountered.

Not much reliance can be placed on the drag work. The area was covered with a heavy kelp growth which greatly retarded

the drag. When one launch would go ahead, the other would stop or be dragged astern with the result that the paths of the launches zigzagged considerably. No obstruction was encountered but it is probable that the wire slipped over as well as cut through a considerable area of the kelp patch.

The conditions for dragging were ideal, the sea smooth. The drag was set out before low water slack with the intention of taking advantage of the slack water, but the kelp growth was too heavy to use this ^{circumstance} ~~fact~~ to the best advantage.

PLOTTING:

It is recommended that this work be plotted on H-5080, a 1930 hydrographic sheet, at the office in Washington.

Respectfully submitted,

R.R. Moore
R.R. MOORE, H.&G. Engr.,
U.S.C. & G.S.S. SURVEYOR.

Approved and forwarded:

F.B.T. Siems
F.B.T. SIEMS, H. & G. Engr.,
Commanding SURVEYOR.

RRM-R

STATISTICS FOR SHEET NO. 5080 Supplemental

| DATE | VOL. | DAY | STATUTE MI. | POSITIONS | SOUNDINGS | VESSEL |
|---------|------|-----|-------------|-----------|-----------|-------------|
| Aug. 19 | 1 | | 8.0 | 101 | 188 | Launch #4 |
| Aug. 19 | 1 | | 8.3 | 66 | 156 | Motorsailer |

May 7, 1932

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 5080 - ADDITIONAL WORK

Locality Shoal Area in Eastern part of Sitkinak Straits,
South Coast Kodiak I., Alaska.

Chief of Party: F. B. T. Siems in 1931

Plane of reference is mean lower low water, reading

3.3 ft. on tide staff at Lazy Bay

17.7 ft. below B. M. 3

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Paul P. Whitney

Chief, Division of Tides and Currents.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5080 (ADDITIONAL WORK)

The following statistics will be submitted with the
cartographer's report on the sheet:

| | |
|---------------------------------------------------------|-------|
| Number of positions on sheet | 167. |
| Number of positions checked | 54. |
| Number of positions revised | 4. |
| Number of soundings recorded | 344. |
| Number of soundings revised | 14. |
| Number of signals erroneously plotted or transferred | NONE. |

Date: June 6 - 1932

Cartographer: W. H. Bamford

SECTION OF FIELD RECORDS

REPORT ON SHEET No. H-5080 (ADD'L Wk)

JUNE - 6 - 1932.

SURVEYED IN

SURVEYED BY

CHIEF OF PARTY

PROTRACTED BY - H.W. MURRAY

SOUNDINGS PLOTTED BY - H.W.M.

VERIFIED & INDEXED BY WARREN H. BAMFORD.

1/ The records were found to conform to the requirements of the General Instructions for Field Work.

2/ The protracting was found to be satisfactory - Approximately 32% of the positions plotted, were checked by the verifier and (4) four positions were found to be erroneously plotted.

3./ The soundings were found to have been very well plotted. Approximately four percent were replotted by the verifier.

4./ The sounding line crossings were found to be adequate.

5./ The development of the shoals surveyed was found adequate.

The $5\frac{1}{2}$ fathom sounding in approximately latitude $56^{\circ}-39'-9.20''$ and longitude $154^{\circ}-02'-6.25''$ was not checked by this survey, although a line was run over this spot, the soundings taken do not indicate the presence of the $5\frac{1}{2}$ fathom shoal.

6./ The ten fathom depth curves, in the area covered by this survey were revised to include this work.

7/ The additional work was plotted on tracing paper and verified on same - then transferred to the smooth sheet.

8/ The shallowest sounding obtained was $7\frac{1}{4}$ fathoms approximately 140 meters west of the $5\frac{1}{2}$ fathom sounding obtained on the original survey (see #5 this report)

Respectfully Submitted

Warren H Bawford

DEPARTMENT OF COMMERCE

AND REFER TO NO. 80-DRM

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS

Review of additional work on Hydrographic Sheet No. 5080

Sitkinak Strait, Alaska

Surveyed in 1931

Instructions dated April 17, 1931

Chief of Party, F.B.T. Siems

Surveyed by R. R. Moore, W. T. Chovan and G. M. Marchand

Protracted and soundings plotted by H. W. Murray


Verified and inked by W. H. Bamford.

1. The records, as well as the plan and character of the sounding work, conform to the requirements of the general and specific instructions.
2. The development on the shoal areas three miles northeast of Flat Pt. is adequate. Two sounding lines were run directly across the 5 1/2 fathom sounding in this area (page 54, vol. 4), 9 fathoms being the least water found on the spot, although 7 1/4 fathoms was found 130 meters to the westward. Although the correctness of the 5 1/2 fathom depth (a single uncorroborated sounding of the 1930 survey) was not verified, in view of the rocky bottom in the immediate locality, the retention of the 5 1/2 on the chart is recommended.
3. The results of the drag operations are not conclusive. The surveyor states in the descriptive report that owing to the heavy kelp growth not much reliance can be placed on the drag work.

The area that should have been dragged consisted of a ridge nearly a mile long in lat. 56°39', long. 154°06'.5. A single drag strip less than one-fourth mile wide was run transverse to the ridge, rather than along its major axis. The drag, with an effective depth of 22 or 23 feet, covered the 4 4/6 fathom sounding (the minimum depth on the ridge), without revealing any lesser depths.

4. The sounding lines across the ridge average 65 meters apart with about the same distance between soundings which has resulted in quite a detailed development. It does not give assurance, however, that the least water has been found. In view of the dominating importance of this area, it is recommended that an intensive development be made of it when circumstances permit. It does not appear possible to drag the area, unless it be done early in the season before the heavy growth of kelp takes place.
5. No additional surveying is recommended, except that noted in the preceding paragraph, and also the 7 1/4 sounding in lat. 56° 38'.7, long. 154° 05'.6, to which attention was called in the review of the 1930 work of this sheet.
6. Reviewed by E. P. Ellis, July 1932.

Approved:


Chief, Section of Field Records


Chief, Section of Field Work